

**Summer Field School [Online] on
MOUNTAIN ECOSYSTEMS AND RESOURCE MANAGEMENT
19-28 September, 2021**

Name of Faculty Member (Facilitator)	Dr. Mihaela Stet (Senior Lecturer, Technical University of Cluj-Napoca, Romania), Eng. Bogdan Cioruța (IT expert & Associate Teaching Assistant, Technical University of Cluj-Napoca, Romania)
Technical Session Group No.	2
Technical Session Group Name	Climate Change and Environmental Impacts in Mountain Ecosystems
Topic	Relationship between climate change - hydropower plants - impact on mountain ecosystems
Sub-Topics	<ul style="list-style-type: none"> ▪ Adaptation to climate change ▪ Environmental impacts in mountains ecosystems ▪ Role of renewable energy sources in decrease of climate change ▪ Relationship between climate change - hydropower plants - impact on mountain ecosystems ▪ Measures to reduce climate change impact
Synopsis (if any) (max. 100 words)	In the last decades there were identified evidence of climate changes. These climate changes are associated with various effects on different types of ecosystems and with changes in mountain ecosystems. To respond to these challenges, some states have started the implementation of general and specific measures, among them being the measures taken within the energy sectors. In the mountain regions, although hydropower plants offer a wide range of benefits compared to thermal power plants, in terms of impact on the environment, significantly reducing air pollution, they are still not without an impact on the environment. Therefore, several forms of impact on the environment of both large power plants and micro-hydropower plants can be highlighted during the construction phase, but also during operation. The presentation reveals the main effects of large and small hydropower plant, identified in Romania in the Carpathian Mountains.
List of Learning Material (Files to be availed to us before 31 August 2021)	<ul style="list-style-type: none"> ▪ PPT presentation (pdf file): ▪ Bibliography (further reading):

List of Learning Material for topic “Relationship between climate change – hydropower plants – impact on mountain ecosystems”

By Mihaela Stet, Bogdan Cioruța, Romania

One attached with email.

PPT presentation (pdf file)

- Pdf file attached with email

Bibliography (further reading)

- [1] IPCC, 2011: [IPCC Special Report on Renewable Energy Sources and Climate Change Mitigation](#). Prepared by Working Group III of the Intergovernmental Panel on Climate Change [O. Edenhofer, R. Pichs-Madruga, Y. Sokona, K. Seyboth, P. Matschoss, S. Kadner, T. Zwickel, P. Eickemeier, G. Hansen, S. Schlömer, C. von Stechow (eds)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, 1075 pp. (Chapter 5 & 9)
- [2] Darie, T, Studiu de evaluare a impactului asupra mediului Parc eolian Crucea Nord, 2010, <https://www.ebrd.com/english/pages/project/eia/45388eiar.pdf>
- [3] Pidhotovka proektnykh propozyziy iz chystoyi enerhiyi: praktychnyy posibnyk / Pid zahal'noyu redaktsiyeyu Tormosova R.YU., Romanyuk O.P., Safiulinoyi K.R. – K.: TOV «Polihraf plyus», 2015. – 176 s.
- [4] Nictorescu M., Doba A., Țîbîrnac M., Nagy A.A., Cosmoiu D., Cerchi G.M., Ilinca C., *Ghid de bune practici în vederea planificării și implementării investițiilor din sectorul microhidrocentrale*, Programul de Cooperare Elvețiano-Român, București, 2016
http://d2ouvy59p0dg6k.cloudfront.net/downloads/ghid_de_bune_practici_mhc.pdf
- [5] WWF-România, 7 mituri despre hidroenergie. Adevărul despre impactul hidrocentralelor asupra naturii și comunităților locale, Text 2013 WWF Programul Dunăre-Carpați
- [6] Uscătescu M.R., (2013) *Impactul asupra mediului produs de amenajările hidroenergetice de mică putere*, Târgu-Jiu

List of weblinks (further reading)